



RAW SEQUENCE LISTING ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 09/831,686
Source: Pct/09
Date Processed by STIC: 8/27/2003

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER
VERSION 4.0 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND
TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

<http://www.uspto.gov/web/offices/pac/checker>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.

Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.

Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<<http://www.uspto.gov/ebc/efs/downloads/documents.htm>> , EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
3. Hand Carry directly to:
U.S. Patent and Trademark Office, Technology Center 1600, Reception Area, 7th Floor, Examiner Name, Sequence Information, Crystal Mall One, 1911 South Clark Street, Arlington, VA 22202
Or
U.S. Patent and Trademark Office, Box Sequence, Customer Window, Lobby, Room 1B03, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202
4. Federal Express, United Parcel Service, or other delivery service to: U.S. Patent and Trademark Office, Box Sequence, Room 1B03-Mailroom, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202

Revised 04/24/2003

Raw Sequence Listing Error Summary

ERROR DETECTED

SUGGESTED CORRECTION

SERIAL NUMBER: 09/831,686

ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE

- 1 Wrapped Nucleics
 Wrapped Aminos The number/text at the end of each line "wrapped" down to the next line. This may occur if your file was retrieved in a word processor after creating it. Please adjust your right margin to .3; this will prevent "wrapping."
- 2 Invalid Line Length The rules require that a line not exceed 72 characters in length. This includes white spaces.
- 3 Misaligned Amino
 Numbering The numbering under each 5th amino acid is misaligned. Do not use tab codes between numbers; use space characters, instead.
- 4 Non-ASCII The submitted file was not saved in ASCII(DOS) text, as required by the Sequence Rules. Please ensure your subsequent submission is saved in ASCII text.
- 5 Variable Length Sequence(s) contain n's or Xaa's representing more than one residue. Per Sequence Rules, each n or Xaa can only represent a single residue. Please present the maximum number of each residue having variable length and indicate in the <220>-<223> section that some may be missing.
- 6 PatentIn 2.0
 "bug" A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid sequences(s) . Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. This applies to the mandatory <220>-<223> sections for Artificial or Unknown sequences.
- 7 Skipped Sequences
 (OLD RULES) Sequence(s) missing. If intentional, please insert the following lines for each skipped sequence:
 (2) INFORMATION FOR SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)
 (i) SEQUENCE CHARACTERISTICS: (Do not insert any subheadings under this heading)
 (xi) SEQUENCE DESCRIPTION:SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)
 This sequence is intentionally skipped

 Please also adjust the "(ii) NUMBER OF SEQUENCES:" response to include the skipped sequences.
- 8 Skipped Sequences
 (NEW RULES) Sequence(s) missing. If intentional, please insert the following lines for each skipped sequence.
 <210> sequence id number
 <400> sequence id number
 000
- 9 Use of n's or Xaa's
 (NEW RULES) Use of n's and/or Xaa's have been detected in the Sequence Listing.
 Per 1.823 of Sequence Rules, use of <220>-<223> is MANDATORY if n's or Xaa's are present.
 In <220> to <223> section, please explain location of n or Xaa; and which residue n or Xaa represents.
- 10 Invalid <213>
 Response Per 1.823 of Sequence Rules, the only valid <213> responses are: Unknown, Artificial Sequence, or scientific name (Genus/species). <220>-<223> section is required when <213> response is Unknown or is Artificial Sequence
- 11 Use of <220> Sequence(s) missing the <220> "Feature" and associated numeric identifiers and responses.
 Use of <220> to <223> is MANDATORY if <213> "Organism" response is "Artificial Sequence" or "Unknown." Please explain source of genetic material in <220> to <223> section.
 (See "Federal Register," 06/01/1998, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of Sequence Rules)
- 12 PatentIn 2.0
 "bug" Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.
- 13 Misuse of n n can only be used to represent a single nucleotide in a nucleic acid sequence. N is not used to represent any value not specifically a nucleotide.



PCT

RAW SEQUENCE LISTING

DATE: 08/27/2003

PATENT APPLICATION: US/09/831,686

TIME: 09:49:06

Input Set : A:\sequence listing.txt

Output Set: N:\CRF4\08272003\I831686.raw

3 <110> APPLICANT: Stephen Alister Locarnini, et al
W--> 4 <120> TITLE OF INVENTION: Biological compositions, components thereof and uses
therefor
6 <130> FILE REFERENCE: 43232-1
8 <140> CURRENT APPLICATION NUMBER: US 09/831,686
C--> 9 <141> CURRENT FILING DATE: 2003-04-10
11 <150> PRIOR APPLICATION NUMBER: EP 99957236.5
12 <151> PRIOR FILING DATE: 1999-11-10
14 <150> PRIOR APPLICATION NUMBER: PCT/AU99/00993
15 <151> PRIOR FILING DATE: 1999-11-10
17 <160> NUMBER OF SEQ ID NOS: 16
19 <170> SOFTWARE: PatentIn version 3.0

ERRORED SEQUENCES

Does Not Comply
Corrected Diskette Needed

1213 <210> SEQ ID NO: 16
1214 <211> LENGTH: 426
1215 <212> TYPE: DNA
1216 <213> ORGANISM: HBV
1218 <400> SEQUENCE: 16
1219 atcctgctgc tatgcctcat cttcttgttg gttcttcttg actatcaagg tatgttgccc 60
1220 gtttgtoctc taattccagg atcatcaacc accagcacgg gaccatgcaa gacctgcaca 120
1221 actcctgctc aaggaacctc tatgtttccc tcatgttgct gtacaaaacc tatggatgga 180
1222 aactgcacct gtattcccat cccatcatct tgggctttcg caaaatacct atgggagtg 240
1223 gcctcagtcg gtttctcttg gctcagttta ctagtgccat ttgttcagtg gttcgtagg 300
1224 ctttccccca ctgtctggtt ttcagttata tggatgatgt ggtattgggg gccagtctg 360
1225 tacaacatct tgagtccctt tatgccgctg ttaccaattt tcttttgtct ttgggtatac 420
1226 atttaa 426
W--> 1230 ??
W--> 1232 ??
W--> 1233 (...continued)
W--> 1235 (continued...)
E--> 1243 ns

delete

See pp 2-3, 10 for more errors

<210> 1
 <211> 226
 <212> PRT
 <213> synthetic

*invalid response - see item 10 on Error
 summary sheet*

<220>
 <221> variant
 <222> (2)..(2) ✓
 <223> Xaa = E or G or D

<220>
 <221> variant
 <222> (3)..(3) ✓
 <223> Xaa = N or S or K

<220>
 <221> variant
 <222> (4)..(4) ✓
 <223> Xaa = I or T

<220>
 <221> variant
 <222> (5)..(5) ✓
 <223> Xaa = T or A

<220>
 <221> variant
 <222> (8)..(8) ✓
 <223> Xaa = F or L

<220>
 <221> variant
 <222> (10)..(10) ✓
 <223> Xaa = G or R

<220>
 <221> variant
 <222> (13)..(13) ✓
 <223> Xaa = L or R

<220>
 <221> variant
 <222> (18)..(18) ✓
 <223> Xaa = G or V

<220>
 <221> variant
 <222> (19)..(19) ✓
 <223> Xaa = F or C

<220>
 <221> variant
 <222> (21)..(21) ✓
 <223> Xaa = L or S or W

<220>
 <221> variant

The types of errors shown exist throughout the Sequence Listing. Please check subsequent sequences for similar errors.

09/83/686 3

<222> (24)..(24) ✓
<223> Xaa = R or K

<220>
<221> variant
<222> (25)..(25)
<223> Xaa = L or R

I/e is at location 25

<220>
<221> variant
<222> (26)..(26) ✓
<223> Xaa = T or K

→ what about Xaa at location 27?

<220>
<221> variant
<222> (30)..(30) ✓
<223> Xaa = Q or K

<220>
<221> variant
<222> (33)..(33) ✓
<223> Xaa = D or H

<220>
<221> variant /
<222> (44)..(44)
<223> Xaa = G or E or A

<220>
<221> variant /
<222> (45)..(45)
<223> Xaa = S or A or V or T or L

<220>
<221> variant
<222> (46)..(46) /
<223> Xaa = P or T

<220>
<221> variant /
<222> (47)..(47)
<223> Xaa = V or R or T or K or G

<220>
<221> variant
<222> (49)..(49)
<223> Xaa = L or P

<220>
<221> variant
<222> (51)..(51) ✓
<223> Xaa = Q or L or K

<220>
<221> variant
<222> (53)..(53) ✓
<223> Xaa = S or L

09/03/686

4

<220>
<221> variant
<222> (56)..(56) /
<223> Xaa = P or Q

<220>
<221> variant
<222> (57)..(57) /
<223> Xaa = T or I

<220>
<221> variant
<222> (59)..(59) /
<223> Xaa = N or S

<220>
<221> variant
<222> (61)..(61) /
<223> Xaa = S or L

<220>
<221> variant
<222> (63)..(63) /
<223> Xaa = T or I

<220>
<221> variant
<222> (64)..(64) /
<223> Xaa = S or C

<220>
<221> variant
<222> (68)..(68) /
<223> Xaa = I or T

<220>
<221> variant
<222> (70)..(70) /
<223> Xaa = P or A

<220>
<221> variant
<222> (78)..(78) /
<223> Xaa = R or Q

<220>
<221> variant
<222> (85)..(85) /
<223> Xaa = F or C

<220>
<221> variant
<222> (100)..(100) /
<223> Xaa = Y or C

<220>

09/837,6865

<221> variant
<222> (105)..(105) ✓
<223> Xaa = P or H or S

<220>
<221> variant
<222> (110)..(110) ✓
<223> Xaa = I or L

<220>
<221> variant ✓
<222> (112)..(112)
<223> Xaa = G or R

<220>
<221> variant
<222> (113)..(113) ✓
<223> Xaa = S or T

<220>
<221> variant
<222> (114)..(114) ✓
<223> Xaa = T or S

<220>
<221> variant
<222> (118)..(118) ✓
<223> Xaa = T or V or A

<220>
<221> variant
<222> (119)..(119) ✓
<223> Xaa = G or E or Q

<220>
<221> variant ✓
<222> (120)..(120)
<223> Xaa = P or A or S

<220>
<221> variant ✓
<222> (122)..(122)
<223> Xaa = K or R

<220>
<221> variant ✓
<222> (125)..(125)
<223> Xaa = T or M

<220>
<221> variant
<222> (126)..(126) ✓
<223> Xaa = T or I or S or A

<220>
<221> variant ✓
<222> (127)..(127)

<223> Xaa = P or T or A or I or L

<220>

<221> variant

<222> (128)..(128) /

<223> Xaa = A or V

<220>

<221> variant

<222> (131)..(131) <

<223> Xaa = N or T

<220>

<221> variant

<222> (133)..(133) /

<223> Xaa = M or K or L

<220>

<221> variant

<222> (134)..(134) /

<223> Xaa = F or Y or I

<220>

<221> variant

<222> (136)..(136) /

<223> Xaa = S or Y

<220>

<221> variant

<222> (137)..(137) /

<223> Xaa = C or S

<220>

<221> variant

<222> (140)..(140) /

<223> Xaa = T or I or S

<220>

<221> variant

<222> (143)..(143) /

<223> Xaa = T or S

<220>

<221> variant

<222> (144)..(144) /

<223> Xaa = D or A

<220>

<221> variant

<222> (155)..(155) /

<223> Xaa = S or T

<220>

<221> variant

<222> (158)..(158) /

<223> Xaa = F or L

09/831,686?

<220>
<221> variant
<222> (159)..(159) /
<223> Xaa = A or G or V

<220>
<221> variant
<222> (160)..(160) /
<223> Xaa = K or R or T

<220>
<221> variant
<222> (161)..(161) /
<223> Xaa = Y or F

<220>
<221> variant
<222> (165)..(165) /
<223> Xaa = W or G

<220>
<221> variant
<222> (166)..(166) /
<223> Xaa = A or G

<220>
<221> variant
<222> (168)..(168) /
<223> Xaa = V or A

<220>
<221> variant
<222> (170)..(170) /
<223> Xaa = F or L

<220>
<221> variant
<222> (174)..(174) /
<223> Xaa = S or N

<220>
<221> variant
<222> (177)..(177) /
<223> Xaa = V or A

<220>
<221> variant
<222> (178)..(178) /
<223> Xaa = P or Q

<220>
<221> variant
<222> (182)..(182) /
<223> Xaa = W or C or S

<220>
<221> variant

09/831,686 8

<222> (183)..(183) /
<223> Xaa = F or C

<220>
<221> variant
<222> (184)..(184) /
<223> Xaa = V or D or A

<220>
<221> variant
<222> (185)..(185) /
<223> Xaa = G or E

<220>
<221> variant
<222> (187)..(187) /
<223> Xaa = S or F

<220>
<221> variant
<222> (189)..(189) /
<223> Xaa = T or I

<220>
<221> variant
<222> (192)..(192) /
<223> Xaa = L or P

<220>
<221> variant
<222> (193)..(193) /
<223> Xaa = S or L

<220>
<221> variant
<222> (194)..(194) /
<223> Xaa = A or V

<220>
<221> variant
<222> (197)..(197) /
<223> Xaa = M or I

<220>
<221> variant
<222> (198)..(198) /
<223> Xaa = M or I

<220>
<221> variant
<222> (200)..(200) /
<223> Xaa = Y or F

<220>
<221> variant
<222> (202)..(202) /
<223> Xaa = G or E

```

<220>
<221> variant
<222> (204)..(204) /
<223> Xaa = S or N or K

<220>
<221> variant
<222> (205)..(205)
<223> Xaa = L or Q

<220>
<221> variant
<222> (206)..(206) /
<223> Xaa = Y or F or H or C

<220>
<221> variant
<222> (207)..(207) /
<223> Xaa = S or G or N or D or T

<220>
<221> variant
<222> (209)..(209) /
<223> Xaa = V or L

<220>
<221> variant
<222> (210)..(210) /
<223> Xaa = S or N

<220>
<221> variant
<222> (213)..(213) /
<223> Xaa = I or M or L

<220>
<221> variant
<222> (220)..(220) /
<223> Xaa = F or C

<220>
<221> variant
<222> (221)..(221) /
<223> Xaa = C or Y

<220>
<221> variant
<222> (223)..(223) /
<223> Xaa = W or R

<220>
<221> variant
<222> (224)..(224) /
<223> Xaa = V or A

<220>

```

```
<221> variant
<222> (225)..(225)
<223> Xaa = Y or I or S
```

<400> 1

[illegible]

VARIABLE LOCATION SUMMARY

DATE: 08/27/2003

PATENT APPLICATION: US/09/831,686

TIME: 09:49:08

Input Set : A:\sequence listing.txt

Output Set: N:\CRF4\08272003\I831686.raw

Use of n's or Xaa's (NEW RULES):

Use of n's and/or Xaa's have been detected in the Sequence Listing.

Use of <220> to <223> is MANDATORY if n's or Xaa's are present.

in <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.

Seq#:1; Xaa Pos. ~~2,3,4,5,8,10,13,18,19,21,24,26,27,30,33,44,45,46,47,49,51~~
Seq#:1; Xaa Pos. ~~53,56,57,59,61,63,64,68,70,78,85,100,105,110,112,113,114~~
Seq#:1; Xaa Pos. ~~118,119,120,122,125,126,127,128,131,133,134,136,137,140~~
Seq#:1; Xaa Pos. ~~143,144,155,158,159,160,161,165,166,168,170,174,177,178~~
Seq#:1; Xaa Pos. ~~182,183,184,185,187,189,192,193,194,197,198,200,202,204~~
Seq#:1; Xaa Pos. ~~205,206,207,209,210,213,220,221,223,224,225~~
Seq#:2; Xaa Pos. 48,54,55,56
Seq#:3; N Pos. 3,10,11,15,21,27,45,48,59,62,65,76,86,96,134,153,164,182,203
Seq#:3; N Pos. 208,220,222,225,228,243,249,254
Seq#:4; Xaa Pos. 2,49,52,53,55,56,65,69,75,195,209,211,222
Seq#:16; N Pos. 427

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/831,686

DATE: 08/27/2003

TIME: 09:49:08

Input Set : A:\sequence listing.txt

Output Set: N:\CRF4\08272003\I831686.raw

L:4 M:283 W: Missing Blank Line separator, <120> field identifier
 L:9 M:271 C: Current Filing Date differs, Replaced Current Filing Date
 L:482 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1 after pos.:0
 M:341 Repeated in SeqNo=1
 L:783 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:32
 M:341 Repeated in SeqNo=2
 L:945 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:0
 M:341 Repeated in SeqNo=3
 L:957 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:4
 L:962 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:4
 L:967 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:4
 L:972 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:4
 L:977 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:4
 L:982 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:4
 L:987 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:4
 L:992 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:4
 L:997 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:4
 L:1002 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:4
 L:1007 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:4
 L:1012 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:4
 L:1017 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:0
 M:341 Repeated in SeqNo=4
 L:1230 M:334 W: (2) Invalid Amino Acid in Coding Region, NUMBER OF INVALID KEYS:1
 L:1232 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:16
 L:1232 M:334 W: (2) Invalid Amino Acid in Coding Region, NUMBER OF INVALID KEYS:1
 L:1233 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:16
 L:1233 M:334 W: (2) Invalid Amino Acid in Coding Region, NUMBER OF INVALID KEYS:1
 L:1235 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:16
 L:1235 M:334 W: (2) Invalid Amino Acid in Coding Region, NUMBER OF INVALID KEYS:1
 L:1243 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:16
 L:1243 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:16
 L:1243 M:254 E: No. of Bases conflict, LENGTH:Input:0 Counted:428 SEQ:16
 L:1243 M:112 C: (48) String data converted to lower case,
 L:1243 M:252 E: No. of Seq. differs, <211> LENGTH:Input:426 Found:428 SEQ:16